

**WHAT IS CLAIMED IS:**

1. A rapid dyeing process for human keratin fibers, comprising  
applying to the human keratin fibers at least one dye composition comprising, in  
a medium suitable for dyeing, at least one direct dye chosen from the following dyes:

- arylmethane dyes,
- cationic azo dyes,
- methine and azomethine dyes, and
- azine dyes,

maintaining the at least one dye composition in contact with said keratin fibers  
for a leave-in time of less than 5 minutes; and

rinsing the treated keratin fibers,

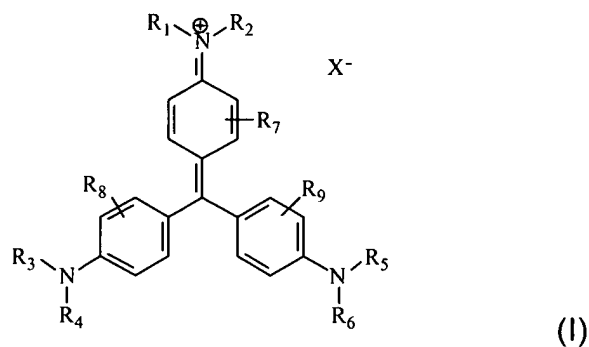
wherein the resulting coloration has, according to the CIELAB notation, an L\*  
value of less than 40 and/or a C\* value of greater than 20, when the at least one dye  
composition is applied to natural hair containing 90% white hairs, at a temperature of  
27°C±5°C for a period of 4 minutes, for a bath ratio of 10.

2. The rapid dyeing process according to Claim 1, wherein the human keratin  
fibers are hair.

3. The rapid dyeing process according to Claim 1, wherein the coloration has,  
according to the CIELAB notation, an L\* value of less than 40 and/or a C\* value of  
greater than 25, when the at least one dye composition is applied to natural hair  
containing 90% white hairs, at a temperature of 27°C±5°C for a period of 4 minutes, for  
a bath ratio of 10.

4. The rapid dyeing process according to Claim 1, wherein the at least one direct dye is chosen from:

- the triaminotriphenylmethane compounds of formula (I):

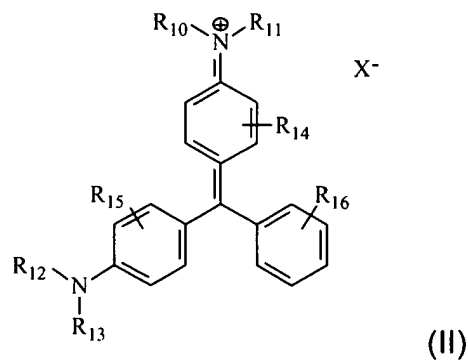


wherein:

$R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$  and  $R_6$ , which may be identical or different, are each chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups,  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups, a phenyl group and a benzyl group, and

$R_7$ ,  $R_8$  and  $R_9$ , which may be identical or different, are each chosen from a hydrogen atom, halogen atoms, and  $C_1$ - $C_4$  alkyl groups;

- the diaminotriphenylmethane compounds of formula (II)



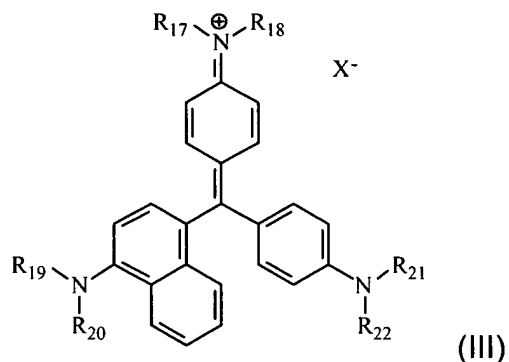
wherein:

$R_{10}$ ,  $R_{11}$ ,  $R_{12}$  and  $R_{13}$ , which may be identical or different, are each chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups, and  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups,

$R_{14}$  and  $R_{15}$ , which may be identical or different, are each chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups, and  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups, and

$R_{16}$  is chosen from a hydrogen atom, halogen atoms,  $C_1$ - $C_4$  alkyl groups, and  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups;

- the triaminonaphthyldiphenylmethane compounds of formula (III)

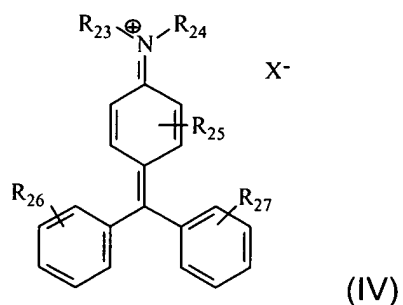


wherein:

$R_{17}$ ,  $R_{18}$ ,  $R_{21}$  and  $R_{22}$ , which may be identical or different, are each chosen from  $C_1$ - $C_4$  alkyl groups and  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups, and

$R_{19}$  and  $R_{20}$ , which may be identical or different, are each chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups,  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups, a phenyl group, a benzyl group, and a toluyl group;

- the monoaminotriphenylmethane compounds of formula (IV)

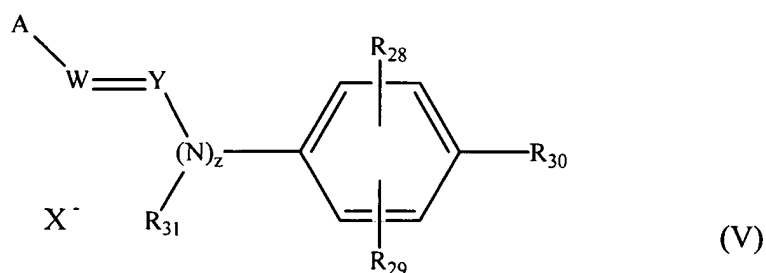


wherein:

$R_{23}$  and  $R_{24}$ , which may be identical or different, are each chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups,  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups, and a benzyl group, and

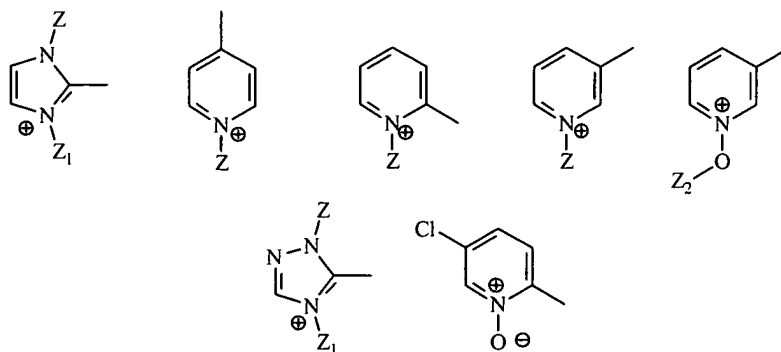
$R_{25}$ ,  $R_{26}$  and  $R_{27}$ , which may be identical or different, are each chosen from a hydrogen atom, halogen atoms, and  $C_1$ - $C_4$  alkyl groups;

- the cationic azo dyes chosen from the monocationic and polycationic azo direct dyes of formula (V):



wherein:

A has one of the following structural formulae:



W and Y, which may be identical or different, are each chosen from a nitrogen atom and a CH group,

Z, Z<sub>1</sub> and Z<sub>2</sub>, which may be identical or different, are each chosen from C<sub>1</sub>-C<sub>4</sub> alkyl groups,

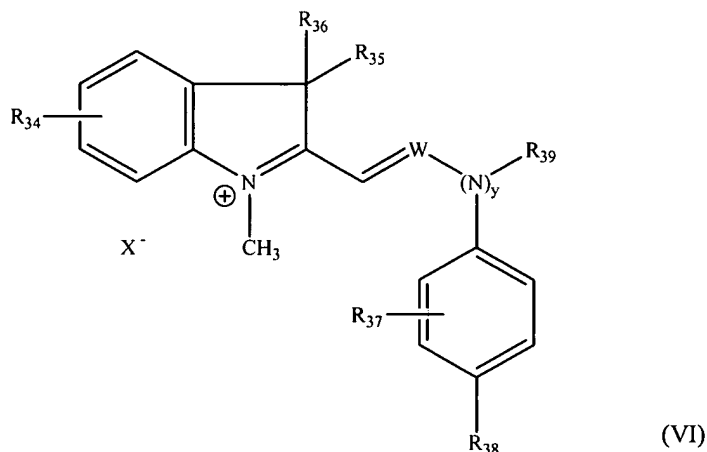
R<sub>28</sub> and R<sub>29</sub>, which may be identical or different, are each chosen from a hydrogen atom, halogen atoms, linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl groups, linear and branched C<sub>1</sub>-C<sub>4</sub> alkoxy groups, and a phenol group making it possible to form a naphthalene sequence with the adjacent phenyl group,

z is an integer that may be 0 or 1, wherein when z = 0, either Y or R<sub>31</sub> connects directly to the benzene ring,

R<sub>30</sub> is chosen from a hydrogen atom, linear and branched C<sub>1</sub>-C<sub>4</sub> alkoxy groups, groups NR<sub>32</sub>R<sub>33</sub> wherein R<sub>32</sub> and R<sub>33</sub>, which may be identical or different, are each chosen from a hydrogen atom, linear and branched C<sub>1</sub>-C<sub>4</sub> alkyl groups, a toluyl group, C<sub>1</sub>-C<sub>4</sub> mono- and polyhydroxyalkyl groups, a -CH<sub>2</sub>SO<sub>3</sub>Na group, and a benzyl group, or forms a heterocycle with the adjacent nitrogen atom and at least one carbon atom of the benzene ring, and

$R_{31}$  is chosen from a hydrogen atom and linear and branched  $C_1$ - $C_4$  alkyl groups, or forms a heterocycle with the adjacent nitrogen atom and at least one carbon atom of the benzene ring;

- the methine and azomethine dyes of formula (VI):



wherein:

$R_{34}$ ,  $R_{35}$  and  $R_{36}$ , which may be identical or different, are each chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl groups,

W is chosen from a nitrogen atom and a CH group,

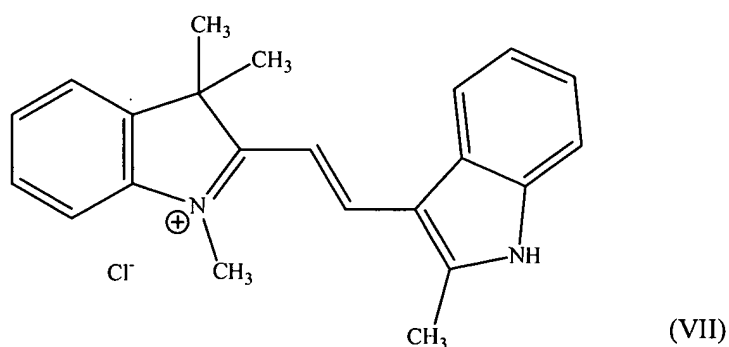
y is an integer that may be 0 or 1, wherein when  $y = 0$ , either W or  $R_{39}$  connects directly to the benzene ring,

$R_{37}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups, and  $C_1$ - $C_4$  alkoxy groups,

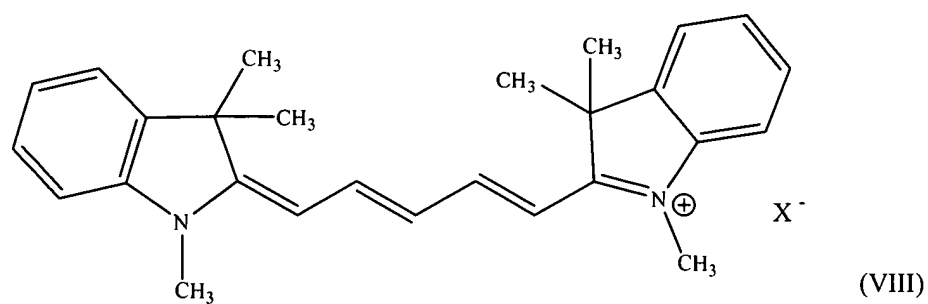
$R_{38}$  is chosen from a hydrogen atom, a methoxy group, groups  $NR_{40}R_{41}$  wherein  $R_{40}$  and  $R_{41}$ , which may be identical or different, are each chosen from  $C_1$ - $C_4$  alkyl groups optionally substituted with at least one entity chosen from a chlorine atom and a cyano group, and

R<sub>39</sub> is chosen from a hydrogen atom and C<sub>1</sub>-C<sub>4</sub> alkyl groups, or forms a heterocycle with the adjacent nitrogen atom and at least one carbon atom of the adjacent benzene ring,

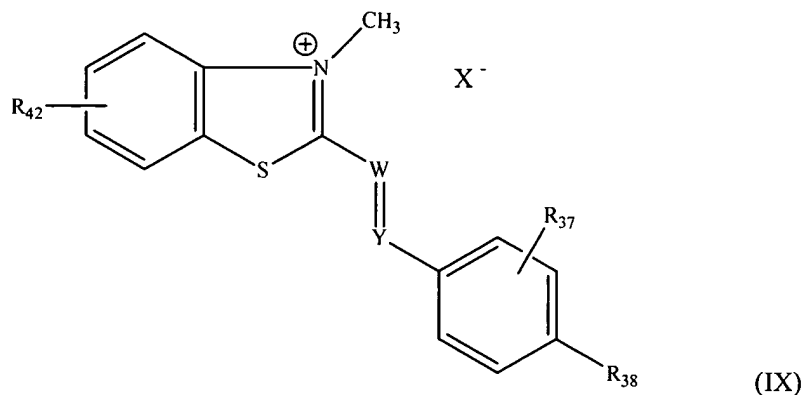
- the methine dye Basic Orange 21 of formula (VII)



-the carbocyanin of formula (VIII):



- the benzothiazole derivatives of formula (IX):



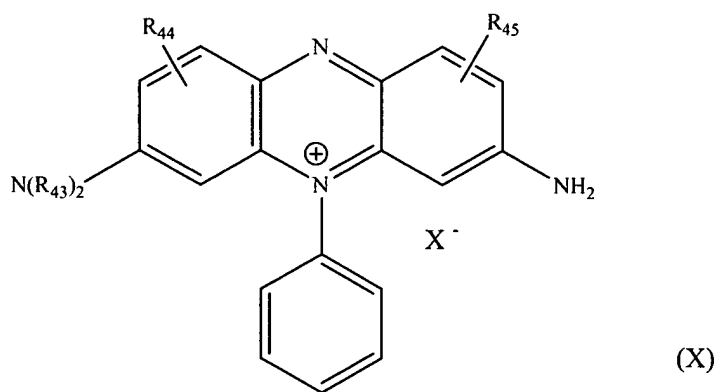
wherein:

$R_{42}$  is chosen from a hydrogen atom,  $C_1$ - $C_4$  alkyl groups, and  $C_1$ - $C_4$  alkoxy groups,

$R_{37}$  and  $R_{38}$  have the same meaning as in the formula (VI), and

$W$  and  $Y$ , which may be identical or different, are each chosen from a nitrogen atom and a  $CH$  group;

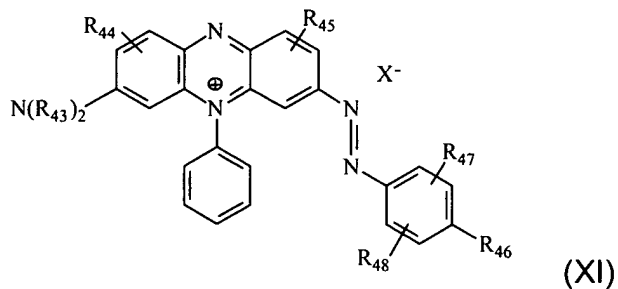
- the phenazines of formula (X):



wherein:  $R_{43}$ ,  $R_{44}$  and  $R_{45}$ , which may be identical or different, are each chosen from a hydrogen atom and  $C_1$ - $C_4$  alkyl groups;



- the azophenazines of formula (XI):



wherein:

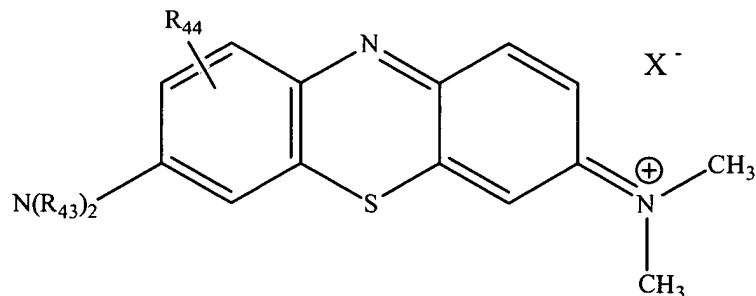
$R_{43}$ ,  $R_{44}$  and  $R_{45}$  have the same meaning as in the formula (X),

$R_{46}$  is chosen from a hydrogen atom, a hydroxyl group, and an amino group,

and

$R_{47}$  and  $R_{48}$ , which may be identical or different, are each chosen from a hydrogen atom, a hydroxyl group and a phenyl group making it possible to form a naphthalene sequence with the adjacent phenyl group;

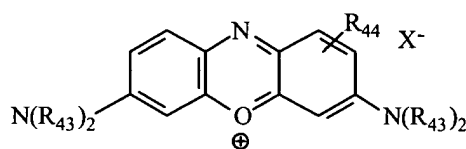
- the thiazines of formula (XII):



(XII)

wherein  $R_{43}$  and  $R_{44}$  have the same meaning as in the formula (X),

- the oxazines of formula (XIII):



(XIII)

wherein  $R_{43}$  and  $R_{44}$  have the same meaning as in the formula (X);

in each of the above formulae (I)-(XIII),  $X^-$  is an anion chosen from anions derived from halogen atoms, and  $\text{HSO}_4^-$ , methosulphate, benzoate and acetate ions.

5. The rapid dyeing process according to Claim 4, wherein in defining  $R_7$ ,  $R_8$ , and  $R_9$  in the formula (I), at least one of the halogen atoms is a chlorine atom.

6. The rapid dyeing process according to Claim 4, wherein in defining  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$ , or  $R_9$  in the formula (I), at least one of the  $C_1$ - $C_4$  alkyl groups is chosen from methyl and ethyl groups.
7. The rapid dyeing process according to Claim 4, wherein in defining  $R_1$ ,  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_5$  and  $R_6$  in the formula (I), the  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups are chosen from a  $\beta$ -hydroxyethyl group.
8. The rapid dyeing process according to Claim 4, wherein in defining  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ ,  $R_{14}$ ,  $R_{15}$ , or  $R_{16}$  in the formula (II), at least one of the  $C_1$ - $C_4$  alkyl groups is chosen from methyl and ethyl groups.
9. The rapid dyeing process according to Claim 4, wherein in defining  $R_{10}$ ,  $R_{11}$ ,  $R_{12}$ ,  $R_{13}$ ,  $R_{14}$ ,  $R_{15}$ , or  $R_{16}$  in the formula (II), at least one of the  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups is a  $\beta$ -hydroxyethyl group.
10. The rapid dyeing process according to Claim 4, wherein in defining  $R_{16}$  in the formula (II), the halogen atom is a chlorine atom.
11. The rapid dyeing process according to Claim 4, wherein in defining  $R_{17}$ ,  $R_{18}$ ,  $R_{21}$ , and  $R_{22}$  in the formula (III), the  $C_1$ - $C_4$  alkyl groups are chosen from methyl and ethyl groups.

12. The rapid dyeing process according to Claim 4, wherein in defining  $R_{17}$ ,  $R_{18}$ ,  $R_{19}$ ,  $R_{20}$ ,  $R_{21}$ , or  $R_{22}$  in the formula (III), at least one of the  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups is a  $\beta$ -hydroxyethyl group.

13. The rapid dyeing process according to Claim 4, wherein in defining  $R_{19}$  and  $R_{20}$  in the formula (III), the  $C_1$ - $C_4$  alkyl groups are chosen from an ethyl group.

14. The rapid dyeing process according to Claim 4, wherein in defining  $R_{23}$ ,  $R_{24}$ ,  $R_{25}$ ,  $R_{26}$ , or  $R_{27}$  in the formula (IV), at least one of the  $C_1$ - $C_4$  alkyl groups is chosen from methyl and ethyl groups.

15. The rapid dyeing process according to Claim 4, wherein in defining  $R_{25}$ ,  $R_{26}$ , and  $R_{27}$  in the formula (IV), the halogen atom is a chlorine atom.

16. The rapid dyeing process according to Claim 4, wherein in defining  $Z$ ,  $Z_1$ , and  $Z_2$  in the formula (V), the  $C_1$ - $C_4$  alkyl groups are chosen from a methyl group.

17. The rapid dyeing process according to Claim 4, wherein in defining  $R_{30}$  in the formula (V), the  $C_1$ - $C_4$  mono- and polyhydroxyalkyl groups are chosen from a hydroxyethyl group.

18. The rapid dyeing process according to Claim 4, wherein in defining  $R_{34}$ ,  $R_{35}$ ,  $R_{36}$ ,  $R_{37}$ , or  $R_{39}$  in the formula (VI), at least one of the  $C_1$ - $C_4$  alkyl groups is chosen from a methyl group.

19. The rapid dyeing process according to Claim 4, wherein in defining  $R_{37}$  in the formula (VI), the  $C_1$ - $C_4$  alkoxy groups are chosen from a methoxy group.

20. The rapid dyeing process according to Claim 4, wherein in defining  $R_{40}$  and  $R_{41}$  in  $NR_{40}R_{41}$  for  $R_{38}$  in the formula (VI), the  $C_1$ - $C_4$  alkyl groups are chosen from methyl, ethyl, and propyl groups.

21. The rapid dyeing process according to Claim 4, wherein in defining  $R_{42}$  in the formula (IX), the  $C_1$ - $C_4$  alkyl groups are chosen from methyl and ethyl groups.

22. The rapid dyeing process according to Claim 4, wherein in defining  $R_{42}$  in the formula (IX), the  $C_1$ - $C_4$  alkoxy groups are chosen from a methoxy group.

23. The rapid dyeing process according to Claim 4, wherein in defining  $R_{43}$ ,  $R_{44}$ , and  $R_{45}$  in the formula (X), the  $C_1$ - $C_4$  alkyl groups are chosen from methyl and ethyl groups.

24. The rapid dyeing process according to Claim 1, wherein the leave-in time ranges from 1 to 3 minutes.

25. The rapid dyeing process according to Claim 24, wherein the leave-in time ranges from 1 to 2 minutes.

26. The rapid dyeing process according to Claim 1, wherein the concentration of the at least one direct dye ranges from 0.001% to 10% by weight, relative to the total weight of the composition.

27. The rapid dyeing process according to Claim 26, wherein the concentration of the at least one direct dye ranges from 0.05% to 5% by weight, relative to the total weight of the composition.

28. The rapid dyeing process according to Claim 1, wherein the pH of the composition ranges from 2 to 11.

29. The rapid dyeing process according to Claim 28, wherein the pH of the composition ranges from 3 to 11.

30. The rapid dyeing process according to Claim 1, wherein the application temperature ranges from room temperature to 80°C.

31. The rapid dyeing process according to Claim 30, wherein the application temperature ranges from room temperature to 60°C.

32. The rapid dyeing process according to Claim 31, wherein the application temperature is at 27°C±5°C.

33. The rapid dyeing process according to Claim 1, wherein the at least one dye composition further comprises at least one adjuvant chosen from anionic, cationic, nonionic and amphoteric surfactants, thickening polymers, conditioners, solvents, alkaline agents, and acidic agents.

34. A rapid stripping process for human keratin fibers, comprising applying to dyed human keratin fibers at least one compound chosen from oxidizing agents and reducing agents with a leave-in time of less than 5 minutes, wherein the dyed human keratin fibers are dyed by a rapid dyeing process, comprising

applying to said keratin fibers at least one dye composition comprising, in a medium suitable for dyeing, at least one direct dye chosen from the following dyes:

- arylmethane dyes,
- cationic azo dyes,
- methine and azomethine dyes, and
- azine dyes,

maintaining the at least one dye composition in contact with said keratin fibers for a leave-in time of less than 5 minutes; and

rinsing the treated keratin fibers,

wherein the resulting coloration has, according to the CIELAB notation, an L\* value of less than 40 and/or a C\* value of greater than 20, when the at least one dye composition is applied to natural hair containing 90% white hairs, at a temperature of  $27^{\circ}\text{C} \pm 5^{\circ}\text{C}$  for a period of 4 minutes, for a bath ratio of 10.

35. The rapid stripping process according to Claim 34, wherein the human keratin fibers are hair.

36. The rapid stripping process according to Claim 34, wherein the at least one direct dye is chosen from Basic Blue 1, Basic Blue 5, Basic Green 1, Basic Green 4, Basic Red 9, Basic Violet 1, Basic Violet 2, Basic Violet 3, Basic Violet 4, Hofmann's Violet, Opal Blue SS, Basic Orange 21, Basic Red 13, Basic Red 14, Basic Violet 16 and Basic Violet 7.

37. The rapid stripping process according to Claim 34, wherein the stripping process uses at least one oxidizing agent and is performed at a basic pH.

38. The rapid stripping process according to Claim 34, wherein the stripping process uses at least one reducing agent and is performed at an acidic pH.

39. The rapid stripping process according to Claim 34, wherein the oxidizing agents are chosen from hydrogen peroxide, urea peroxide and persalts.

40. The rapid stripping process according to Claim 39, wherein the persalts are chosen from perborates, percarbonates and persulphates.

41. The rapid stripping process according to Claim 34, wherein the reducing agents are chosen from sulphites, hydrosulphites and sulphinates.